Patent Claims

1. A chemical sensor having a first metallization plane arranged on a substrate (1) and in which an electrode structure (IDT) is formed, a passivation layer (6) applied to the first metallization plane and structured with contact holes, and a sensitive ceramic layer (9) on the passivation layer (6) and in the contact holes (7), characterized in that a bond promoting layer (8)is provided which is configured as a second metallization plane and is located between the passivation layer (6) and the ceramic layer (9).

2. The chemical sensor according to claim 1 characterized int that the second metallization plane is so applied that it comes to lie in the contact holes (7) upon the first metallization plane.

3. The chemical sensor according to claim 1 or 2, characterized in that a further passivation layer (10) is located between the bond promoting layer 8 and the ceramic layer (9) and so structured that the body promoting layer (8) is partially passivated.

4. The chemical sensor according to one of the claims 1 to 3 characterized in that in the electrode structure (IDT) of the first metallization plane, two coplanar electrodes (IDT1, IDT2) are formed by structuring and the second metallization does not lie at a defined electrical potential.

5. The chemical sensor according to one of claims 1 through 3 characterized in that the electrode structure (IDT) of the first metallization plane forms a first electrode (IDT1) and the second metallization plane is configured as a second electrode (IDT2) and lies at a defined electrical potential so that the sensitive ceramic layer (9) is provided with a vertical electrode.

6. The chemical sensor according to one of claims 1 to 5 characterized in that the electrodes (IDT 1, IDT 2) are configured as interdigitating electrodes.

7. The chemical sensor according to one of claims 1 to 6 characterized in that in the first metallization plane, in addition to the electrode structure (IDT) a heating structure (4) and a temperature measuring structure (5) are formed.

8. The chemical sensor according to one of claims 1 to 6 characterized in that the structures (4, 5, IDT) of the metallization are formed on the front side of an Si-substrate (1) which has a membrane (3).

9. The chemical sensor according to one of claims 1 to 8 characterized in that the material for the second metallization plane is Au, Cr/Au, Pt, Pd, W or Sn.

10. The chemical sensor according to one of claims 1 to 9 characterized in that the application of the sensitive ceramic layer is effected by silk screening, dispenser application or an ink jet process.